

N-Acetyltransferase 2 (NAT2) Genotype, Varies

Test ID: NAT2Q

Useful for:

Identifying patients who may be at risk for altered metabolism of drugs that are substrates of arylamine *N*-acetyltransferase type 2 (NAT2), including isoniazid

Methods:

Real-Time Polymerase Chain Reaction (PCR) with Allelic Discrimination Analysis

Reference Values:

An interpretive report will be provided.

Specimen Requirements:

Multiple genotype tests can be performed on a single specimen after a single extraction. See [Multiple Genotype Test List](#) for a list of tests that can be ordered together.

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| Specimen Type: | Whole blood |
| Container/Tube: | Lavender Top (EDTA) |
| Specimen Volume: | 3 mL |
| Collection Instructions: | 1. Invert several times to mix blood. 2. Send whole blood specimen in original tube. Do not aliquot. |
| Specimen Stability Information: | Ambient (preferred) 9 days/Refrigerated 30 days |
| Minimum Volume: | 0.4 mL |

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|--|---|
| Specimen Type: | Saliva |
| Patient Preparation: | Patient should not eat, drink, smoke, or chew gum 30 minutes prior to collection. |
| Supplies: | Saliva Swab Collection Kit (T786) |
| Specimen Volume: | 1 Swab |
| Collection Instructions: | Collect and send specimen per kit instructions. |
| Specimen Stability Information: | Ambient 30 days |

Specimen Type: Extracted DNA

Container/Tube: 2 mL screw top tube

Specimen Volume: 100 mcL (microliters)

Collection Instructions: 1. The preferred volume is 100 mcL at a concentration of 50 ng/mcL.
2. Include concentration and volume on tube.

Specimen Stability Information: Frozen (preferred)/Ambient/Refrigerated

Specimen Stability Information:

| Specimen Type | Temperature | Time | Special Container |
|---------------|-------------|------|-------------------|
| Varies | Varies | | |

Cautions:

Rare variants (ie, polymorphisms) may be present that could lead to false-negative or false-positive results. If results obtained do not match the clinical findings (phenotype), additional testing should be considered.

Samples may contain donor DNA if obtained from patients who received nonleukoreduced blood transfusions or allogeneic hematopoietic stem cell transplantation. Results from samples obtained under these circumstances may not accurately reflect the recipient's genotype. For individuals who have received blood transfusions, the genotype usually reverts to that of the recipient within 6 weeks. For individuals who have received allogeneic hematopoietic stem cell transplantation, a pretransplant DNA specimen is recommended for testing.

NAT2 genetic test results in patients who have undergone liver transplantation may not accurately reflect the patient's arylamine *N*-acetyltransferase type 2 (*NAT2*) status.

This method may not detect all variants that result in altered *NAT2* activity. Therefore, absence of a detectable variant does not rule out the possibility that a patient has altered *NAT2* metabolism due to other *NAT2* variants that cannot be detected with this method. Furthermore, when 2 or more variants are identified, the cis-/trans-status (whether the variants are on the same or opposite chromosomes) is often not known; therefore, multiple haplotypes may be provided.

CPT Code:

81479-Unlisted molecular pathology procedure

Day(s) Performed: Monday through Friday

Report Available: 3 to 8 days

Questions

Contact Michelle Rath, Laboratory Technologist Resource Coordinator at 800-533-1710.